



CERTIFICATE OF ANALYSIS (COA)

Product Name	BLACK SPRUCE ESSENTIAL OIL
Botanical Name	Picea mariana
Product Code	GF2021
CAS #	8008-80-8 ; 91722-19-9
FEMA #	3034
EINECS #	294-420-3
INCI Name	Picea Mariana (Black Spruce) Oil

Batch #	10212603
Manufacturing Date	MARCH 2026
Best Before Date	FEBRUARY 2028

Part Used	Needles
Extraction Method	Steam Distilled Essential Oil
Quality	100% Pure and Natural
Note Classification	Top to Middle Note

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Colorless to pale yellow liquid	CONFORMS
Odour	Fresh, penetrating, pine forest-like aroma with balsamic, woody undertones	CONFORMS
Refractive Index	1.466 - 1.472 @ 20°C	1.470
Specific Gravity (g/mL)	0.900 - 0.930 @ 20°C	0.920
Optical Rotation (°)	-41° to -25°	CONFORMS
Solubility	Soluble in alcohols and fixed oils; Insoluble in water	CONFORMS

Comments	Odour quality is excellent
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<u>MICROBIAL ANALYSIS</u>	<u>SPECIFICATIONS</u>	<u>STANDARDS</u>	<u>RESULTS</u>
Aerobic Mesophilic Bacterial Count	< 100 CFU/g	ISO 21149	CONFORMS
Yeast and Mould	< 10 CFU/g	ISO 16212	CONFORMS
Candida albicans	ABSENT / 1g	ISO 18416	CONFORMS
Escherichia coli	ABSENT / 1g	ISO 21150	CONFORMS
Pseudomonas aeruginosa	ABSENT / 1g	ISO 22717	CONFORMS
Staphylococcus aureus	ABSENT / 1g	ISO 22718	CONFORMS

<u>HEAVY METAL TESTS</u>	<u>SPECIFICATIONS</u>	<u>STANDARDS</u>	<u>RESULTS</u>
Lead: Pb (mg/kg or ppm)	< 10 ppm	na	CONFORMS
Arsenic: As (mg/kg or ppm)	< 2 ppm	na	CONFORMS
Mercury: Hg (mg/kg or ppm)	< 1 ppm	na	CONFORMS

STABILITY AND STORAGE:

Keep in tightly closed container in a cool and dry place, protected from sunlight. When stored for more than 24 months, quality should be checked before use.

As it is electronically generated document, hence no signature required.

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